

FIGURE 1 2,367,660

FIG. 1

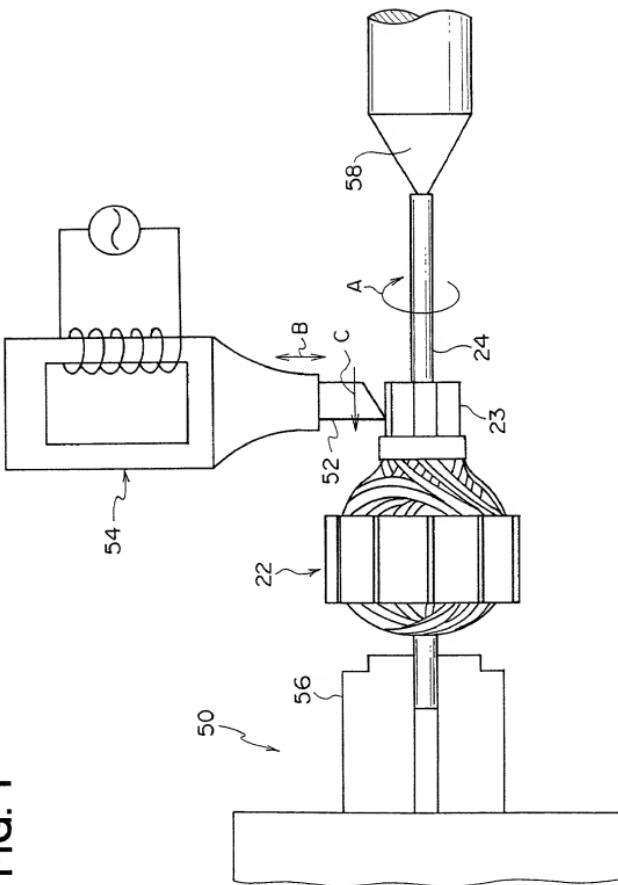


FIG. 2

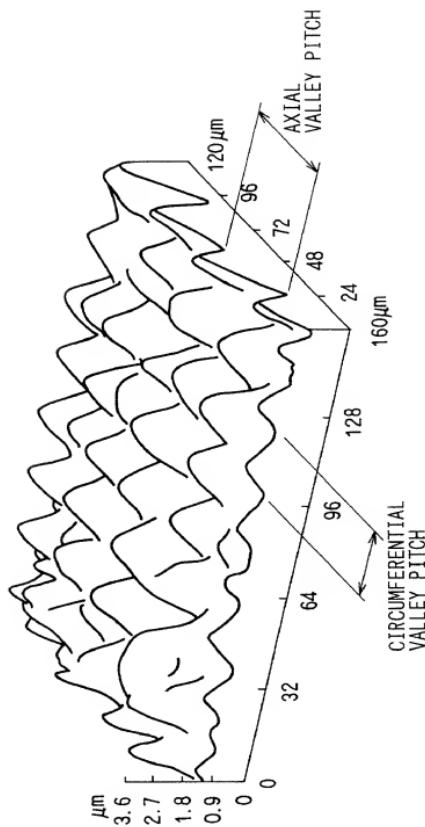


FIG. 3

EFFECTS OF SURFACE ROUGHNESS OF COMMUTATOR

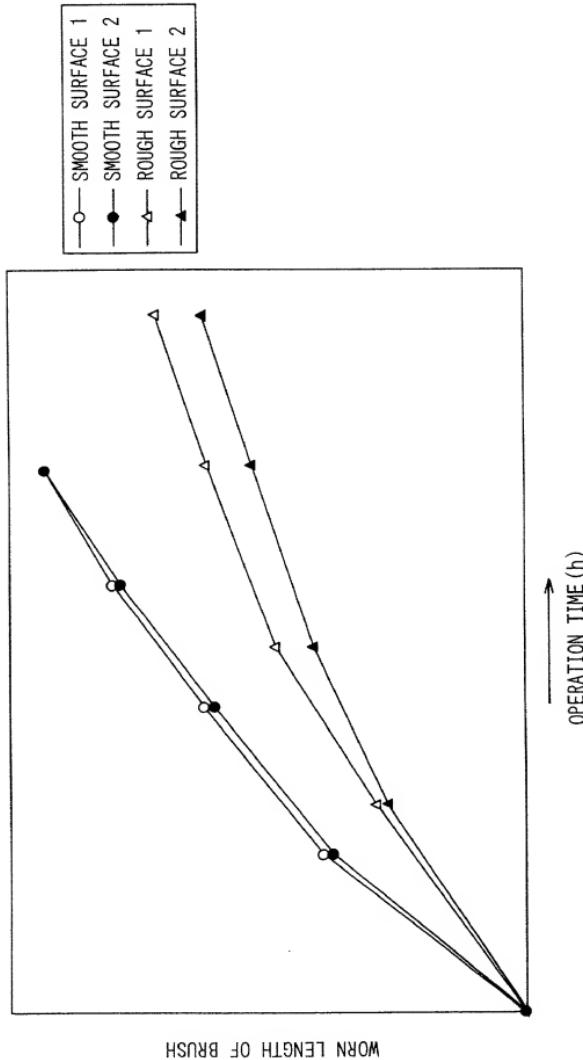


FIG. 4A

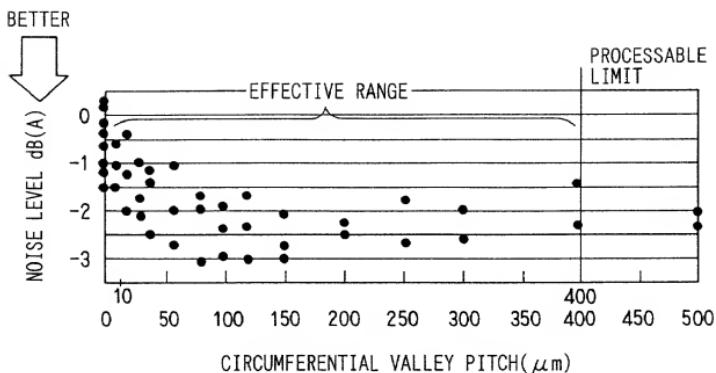


FIG. 4B

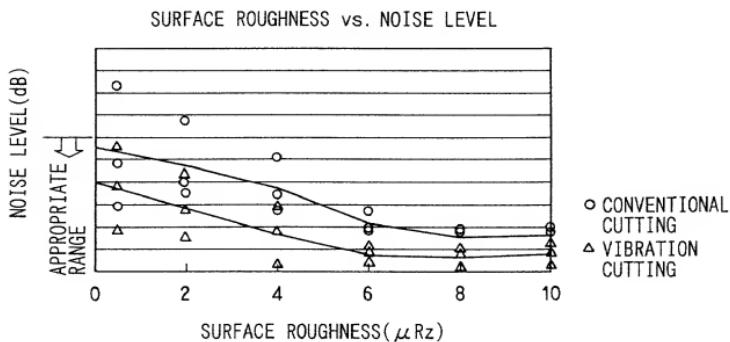
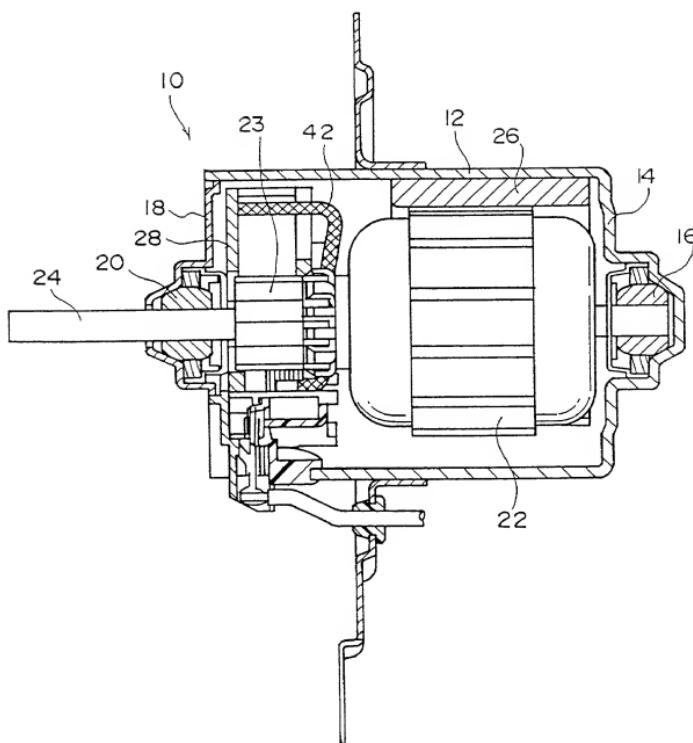
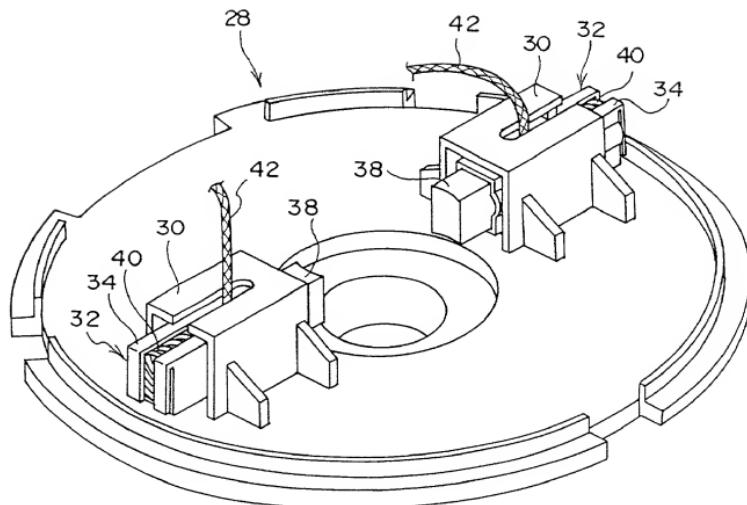


FIG. 5



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FIG. 6



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FIG. 7

